WHAT IS CLAIMED IS:

1.   A spectrum measurement system for measuring a spectrum of a wireless communication device to be finished, comprising:

a preamplifier for receiving input signals from the wireless communication device to be measured and pre-amplifying the same;

a down converter coupled to the preamplifier for decreasing a frequency of the amplified signals to an IF;

an IF filter coupled to the down converter for receiving the IF signals from the down converter and filtering the same based on a predetermined frequency resolution and a predetermined center frequency;

a power meter coupled to the IF filter for measuring a power of the IF signals; and

a PC coupled to the power meter via a first control interface, the PC being operative to read the measured power from the power meter, convert the read measured frequency into a real frequency based on a created calibration table, take the real frequency as a frequency axis and the power as a power axis, and plot a frequency analysis graph with respect to the wireless communication device to be measured.

2.   The spectrum measurement system of claim 1, further comprising:

a scanning circuit coupled to the PC via a second control interface, the scanning circuit being operative to generate a predetermined waveform in response to a command from the PC; and

a VCO coupled to the scanning circuit wherein an oscillation frequency of the VCO is controlled by a waveform sent from the scanning circuit, the VCO is operative to generate a local oscillation frequency capable of being linearly scanned back and forth in a predetermined frequency range, and the local oscillation frequency is sent to the down converter for mixing with

the IF signals.

3. The spectrum measurement system of claim 2, wherein the calibration table is created by coupling the measured wireless communication device selected from a series of wireless communication devices having a bandwidth complied with the specifications to the spectrum measurement system, and activating the PC to refer the read measured spectrum to a real spectrum of the wireless communication device.

4. The spectrum measurement system of claim 2, wherein the spectrum measurement system is operative to measure the wireless communication device by performing operations comprising:

commanding the PC to send a control signal to the scanning circuit via the second control interface;

causing the scanning circuit to create a predetermined waveform for controlling a local oscillation frequency generated by the VCO to be linearly scanned back and forth in the predetermined frequency range;

pre-amplifying signals inputted from the wireless communication device at the preamplifier;

decreasing the frequency of the amplified signals mixed with the local oscillation frequency generated by the VCO at the down converter for obtaining IF signals;

filtering the IF signals by the IF filter to obtain a measured spectrum having the predetermined frequency resolution and the predetermined center frequency;

activating the power meter to measure the power of the IF signals; and

activating the PC to read a plurality of measured frequencies and power values of the wireless communication device to be measured.

5. The spectrum measurement system of claim 4, wherein the PC is

operative to take the measured frequency as a frequency axis and the power as a power axis based on the read measured frequency and power for plotting a frequency analysis graph of the wireless communication device, converting the measured frequency into a real frequency, and plotting a real frequency analysis graph of the wireless communication device to be measured by referring the frequency analysis graph to the calibration table.